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AMERICAN JOURNAL OF PHOTOGRAPHY

AN ILLUSTRATED MONTHLY,
DEVOTED TO PHOTOGRAPHY
IN ITS WIDEST SENSE

Vol. XIX

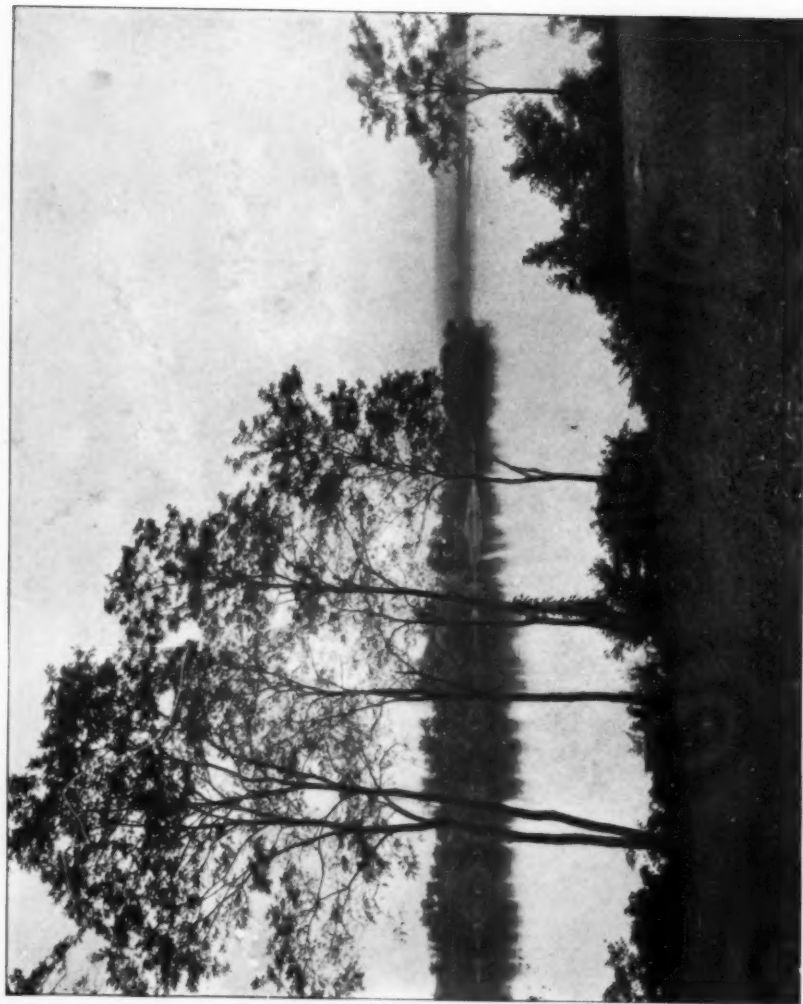
FEBRUARY, 1899

No. 218

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INGLENOOK ON THE SUSQUEHANNA

NEGATIVE BY WILLIAM H. BAU

AMERICAN JOURNAL OF PHOTOGRAPHY

AUSTIN C. LEEDS, *Publisher*
JOHN BARTLETT, *Editor*

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COMPOSITION IN LINES AND FORMS.

COMPOSITION considers not only the disposition of lines and forms, but includes in its scope the balancing of masses, light and shadow, values and color; but we shall confine ourselves to a consideration of the management of lines and forms, in agreeable clusters.

Why is scattering in a picture most always looked upon as a defect in composition? It is because the painter of such a picture violates a fundamental physiological law, which it is necessary to observe in order to produce the sensation of pleasure. Grouping is a constant law in nature, which we see exemplified every day, wherever there is a crowd of idle or busy people, when sheep or cattle gather together in flocks or herds, in pasture or by the water side. Even inanimate things—the rocks, the trees, the clouds—seem to have a feeling for harmonious relations of the diverse parts, else how could we have so many charming views from nature, by painting and by photography, in which the great æsthetic law of unity in variety, the subordination of many to one, is manifest.

The means by which nature constantly makes assemblages of objects pleasing to the eye is through perspective, which the eye itself creates—just as does the photographic lens. Linear perspective is the basis of linear grouping. Beautiful productions, of course, were made by keen, observing painters before the discovery of the principles of perspective, but it was by those who went directly

to nature for inspiration and who trusted implicitly the avouch of their vision. Some of the old masters, despite the beauty of coloring, wofully offend in false perspective.

It was only after the laws of perspective were understood that the general appearances of nature were more correctly copied.

We all have more or less experience in observing the effect produced by perspective, and where there is considerable regularity in the objects, the effect is strikingly manifest. As when we look down the street at the receding rows of houses on both sides, or along a railroad track, and notice the diminishing size of the locomotive as it leaves the station. But in landscape the irregularity makes it more difficult to determine the vanishing point and the painter sometimes gets his horizon line improperly placed, or not as effectively placed as it might be.

A good deal of the impression the picture has upon the spectator depends upon the height of the horizontal line—a point in composition not always taken into consideration by the camera artist. Convenience in focussing frequently brings the horizon too near the centre of the picture. It was a remark of Stothard that grandeur might be obtained by striking a high or low horizon, but when the horizon is just in the middle of the picture effect must be sought for in some other artistic principle.

In many of Stothard's own pictures we see the exemplification of the value of a high horizon, and in Titian's "Peter Martyr" there is afforded an instance of the grandeur of a low one. A great many of Titian's paintings owe much of their impressiveness to the low horizontal line.

By perspective, therefore, we are taught that all objects are apparently altered in magnitude and shape as they approach or recede from the eye, and that these alterations are infinitely varied as the points of distance and sight are changed.

It is needless to say that logically it is impossible for two lines, parallel, to meet in a point, but the law of artistic conception is above the law of geometry just as the moral law transcends the physical law, being subject to the interpretation of a higher power.

If there were no apparent contradictions there could be neither æsthetic enjoyment nor moral truth. The presentation of both is in accordance with the limitations of our being and in harmony with our present means of perception. In another condition it

may be possible to perceive absolute truth and at the same time experience intense pleasure. But let us be thankful, though it be through a glass darkly, "the vision of the earth and every common sight, to us does seem apparelled in celestial light."

In the unifying of the different elements the knowledge of the law will be of little assistance unless directly under the control of taste.

The photographer, like the painter, may focus where he pleases, but that point, remember, becomes the centre of interest whence the lines radiate. In many of the Dutch paintings, we see the point of interest is well defined and all the lines of the picture seem to converge to that spot.

The point of interest is not necessarily the centre of the picture as Leonardo da Vinci has done in his picture of the "Last Supper," probably from the necessity of the subject. The point of sight may be shifted right or left as artistic perception may demand, or raised high or low as the needs of the sky or the middle distance or ground may require.

It is not intended that the photographer any more than the painter should be possessed with the idea that there is nothing in a picture worthy of consideration but perfect perspective.

Painting and the recent artistic school of photography, instead of selecting for subjects views representing miles and miles of prospect, see more effective themes in what are called the "little bits," strips of marshes, meadow lands, interiors of woods, a few sheep by a hillside, etc. Individuality, sentiment, personal feeling, the man himself is better brought out than in grand canvases of the Yosemite, the Alpine Mountain Peaks or illimitable prospects.

The principle of unity in variety, the subordination of the many to one may be better secured by making our pictures consist of as few elements as possible, observing simplicity and not trying to crowd into our pictures a vast congregation of things, each of which, like Bottom will cry out for supremacy, but which like the immortal weaver, too often play the part of the ass for appropriateness. Our remarks here apply more to figure or genre composition. We frequently hear a critic say, in judging a picture, "that space is too empty," and the receptive photographer next time heeding the advice looks around for a stop-gap for some hungry, vacant spot in his picture and draughts into service any thing, no matter how incongruous to the theme it may be. Now, maybe that "gap" in your picture really adds to the pictorial effect.

Your figure should always have space enough to move around comfortably, and sometimes a vacant space behind a figure gives a marvelous effect of motion. We see that the person has moved through that space.

The mere huddling together of things is not artistic composition. Each element introduced must play a part like a note or bar in musical harmony.

A group is not composed when a background is run into position, a studio chair gracefully posed, an elaborately carved table set at the right angle to most effectively display its contortions, a rug laid with careless affectation and then your living models invited to look as natural and consistent with the surroundings as possible, with due regard to their frissure or fashionably made garments. Such a grouping the scene shifter will get up in the interim of the ringing down and up of the curtain.

A composition to be effective must be animated by a definite purpose, not like the Duke in Twelfth Night, "its business everything, its intent everywhere." The more graphically and distinctly the purpose is related the more successful the picture. The work should be all of a piece and the people and things should be there for an end—for reflectors of the dominant motive. To illustrate from literature, an effective story or poem concentrates all on the hero, all digression is resented by the reader as irrelevant.

Take for instance Hamlet. Every character introduced is to develop some phase of Hamlet's disposition, they are really only reflexes of Hamlet.

Where there are many points of interest in a picture to divide our attention, even though it be painted by a great master its effect is not enjoyable.

In the "Transfiguration" and in the "Dispute about the Sacrament," Raphael divides his pictures into two distinct parts, introducing scenes in Heaven and Earth, and although these pictures are possessed of sublime beauties, the style of composition has always been objected to.

Management of lines has much to do with the character of the subject: a perpendicular line gives dignity and is often effective in portraiture or in groups.

Some of the finest portraits of the old masters represent their sitters in erect postures with the lines of the drapery even severe, not broken by wavy folds.

Could any portrait be more effective than Da Vinci's "Mona Lisa" (La Gioconda) or "Santa Barbara" by Palma.

The horizontal line gives repose. Daille in his "Dream" representing soldiers with stacked arms asleep upon the field, makes most effective use of the horizontal line and gives emphasis by a repetition of it on a minor scale, by means of the furled flag supported on two upright stacks of muskets.

The diagonal line is adapted to perspective effects such as a roadway between trees or a wall or fence running along on one side of the way.

It is also well introduced in pictures where the hills or the trees cut off a part of the sky view. Pictures representing objects in motion make use of the diagonal line of composition.

The pyramidal arrangement has been so overdone in photographic art that one hesitates to mention it as a mode of composition, but where the lines are not too suggestive of the form it is often very effective. It may be remarked that though the laws of nature have been best obeyed by the best painters, the principles resulting from them are not always ostentatiously conspicuous in their works; and indeed art is always the more perfect in the degree in which its impression is made by means that do not court notice.

From the *Christian Neighbor*, Columbia, S. C., Feb. 9th, 1899.

AMERICAN JOURNAL OF PHOTOGRAPHY for January, 1899, is the first issue under the new publisher (Austin C. Leeds, 817 Filbert Street, Philadelphia, Pa.), and it is a creditable one. John Bartlett continues in charge of the editorial department. The JOURNAL is "an illustrated monthly magazine devoted to photography in its widest sense." In the new year announcement we find the following: * * * * *

From a careful and interested examination of the JOURNAL we are glad to express hearty commendation of it. Photography has made such great advances, and has become such a popular occupation and pleasure, that a magazine devoted to the art is of course a necessity. And this one is practical, reliable and beautiful. Best of all it is *clean*. Its pictures are exquisite; but it does not cater to tastes which delight in the nude under the plea of "art for art's sake," nor under any other plea. We, therefore, wish to specially commend the JOURNAL, and we call attention to this feature, which makes it a safe periodical in the home, which, unhappily, many of the popular magazines with their half-draped actresses and profusion of stage talk—are not.

Owners of kodaks and those interested in the photographic art—particularly landscapes—would be likely to find this an agreeable monthly visitor. Price \$1 per year. Address as above.

HOAR FROST EFFECTS.

A. P. SARGENT.

IN my contribution to your last number I tried to give my experience, with some advice, in photographing snow scenes. On reading it over in print, I see I might have said something about a kindred subject without here taking your valuable space—I mean about hoar frost effects. It is a kindred subject, naturally; that is, it concerns the effects produced by cold, or water, or watery vapor; nevertheless the photography of hoar frost requires a different method from that of snow and ice.

The principal difficulty in snow scenes is to avoid too great contrast in the subject. The picture is apt to be too hard and black and white, instead of soft and full of a rich gradation of half-tones; whereas, the trouble with hoar frost is in the danger of too great uniformity. It is because of the necessity of a different treatment that I so soon usurp a place in your paper. But, I fear that the inexperienced photographer may imagine that the method I advocate for snow is applicable as well to hoar frost, and so come to the conclusion either that I have given bad advice or become discouraged at his want of success with the method.

To prevent the too great contrast in snow pictures, as was said in the former paper, one should not undertime, even though the light reflected from the surfaces is considerable, but give rather a full exposure to modify the tendency to excessive contrast. Special precaution of course, being required in the management of the development.

Hoar frost pictures are generally such as do not include any extended view but are confined to the treatment of subjects like bushes or branches of trees covered with rime or those fairy-like delineations on the window panes—the delight of our childhood.

In such subjects contrast is necessary, and far from keeping it down, as in snow pictures, to get any pictorial rendering we must go out of our way, if possible to secure it.

We have white, white, everywhere, and with a broad management of the light would have nothing to show for our pains but flat and tame photographs. It is true even the white crystalline laces and fringes do look as if they had relief against the background of the sky, but in the finished picture they come out much blacker than was expected. I think it would not be con-

sidered faking, wherever it is possible, to set up a suitably toned background and get the hoar frost picture with proper contrast.

Now as regards illumination, a direct side light is the most favorable because it casts the shadows so that one part is relieved against another. All the delicacy of the fine tracery will thus be secured and even white on white will show. I think too it would be fair wherever it could be done to curtain off the top and front light so that the predominance could be given to the side light.

Now as regards plates to be used and appropriate developer. A slow plate, non halation by all means, is the best, giving crispness and brilliancy. If you have not the non halation plate, back a plate with yellow paper or some of the numerous opaque colors.

The development should be such as will contribute to contrast—hence an excess of the pyro or hydroquinone over the alkali. Personally I always use ferrous oxalate for hoar frost exposures, not that I do not believe in the superiority of the modern developing agents, but because for the special purpose it is the best, and I think that with the resources we have in the phalanx of modern developers we do not utilize the peculiarities of the various agents. I believe that if intelligently studied they might be specialized and we might secure the value of their peculiar action for certain kinds of work; but this is a digression from the subject of hoar frost photography.

Ferrous oxalate development is a wonderful corrector of exposures which have a tendency to run flat. But, as ferrous oxalate is now seldom used, I would recommend fresh pyro and potash, without the sulphite of soda, and the addition of citric acid to the developer—a ten per cent solution: five drops.

I have not been able to get the desired effect either with metol or eikonogen.

The first number of the new volume of the AMERICAN JOURNAL OF PHOTOGRAPHY has for its frontispiece a fine landscape taken by the well known photographic artist, William H. Rau, of Philadelphia. A photo engraving of a noted canvas of the English painter Constable, called "The Hay-Wain," doubtless faithfully reproduces the striking effects of the original. Other views are illustrations of "Bingen on the Rhine," snow pictures, studies of cloud effects, etc. There is an absence of the sensuous element in art, which is the bane of many of the popular magazines. Possessors of the camera and kodak will find this monthly (\$1.00 a year) a help. John Bartlett continues in the editorship. Austin C. Leeds, 817 Filbert St., Philadelphia, is the publisher.—*Chester Co. Times*.

CHILD PHOTOGRAPHY.

CHILD LIFE, as we know it, rarely, if ever, meets with expression in ancient art. The Greeks give us no conception of what Greek children were like. There is only one true picture of child nature in the whole range of Greek literature ; that is in Homer, where the little son of Hector is frightened into tears at the sight of the big helmet of his father. This beautiful touch of nature makes it akin to the scenes of our own domestic hearth. The group of Niobe and her children is full of pathos to us, because we sympathize with the mother's grief and look with sorrow at the daughter clinging to the bosom of her mother but it is doubtful whether the sculptor intended to awaken any sympathetic chord in the heart of the beholder. Niobe, though "all tears," has on her countenance that divine repose of which we moderns have no conception, at least in our sculpture, and which lifts her out of the sphere of human feeling or sentiment, to an apotheosis of calm and elevated beauty.

It is not necessary to explain the motive for the production of the statues of the infant Hercules, or Hermes, Silenus, Dionysius, or even the little Love God, or baby Romulus and Remus, for it is evident to everyone that they were not conceived to gratify any delight for the simplicity, innocence, or mischievousness of child life, but solely for the austere purposes of religious ceremonial.

It was only when Christianity exalted the sanctity of motherhood in the Madonna, and the holiness of childhood in the infant Christ, that a new world of light, love and truth dawned upon society and art.

It was not long before the new spirit found utterance upon the canvas by the receptive minds of the great painters. Raphael stands pre-eminent as the painter of Christian life, not confined to the cloister, but entering into the domestic hearth, adapted to the world about us, sympathizing with all the real wants of our nature to purify and elevate it. As Fuseli calls him, Raphael is "the warm master of our sympathies." Wherever he represents child life, it is with all the innocence and simplicity of the little child.

The boy in the cartoon of the "Beautiful Gate," just like an impatient boy, pulls the girdle of his grandfather, who is too absorbed in what Peter is saying to the cripple, to notice him. The child wants the old man to move on. And so, in another

cartoon, the "Sacrifice at Lystra," there are two beautiful boys about the altar; but one, just like a boy, cares nothing for the sacredness of the occasion, but is busy watching the ram brought to the sacrifice; the other boy is absorbed with his performance on the pipes.

The quiet simplicity of those sweet children of Raphael has an indescribable charm of native simplicity, where every other figure in the scene is under the influence of excitement, in which the boys take no part.

An inferior artist would have made them devoutly engaged in the performance.

We can only mention the mingled loveliness and simplicity of the beautiful child angels of Lucca Angelica Corregio Puragino, and the little, chubby-featured, singing cherubs of Robbio. Then, there is Murillo, whose portraits of the Holy

Child have the combined grace of the divine and the human. He pictures real childhood in the exquisite painting of the "Good Shepherd with the Lamb," and in the beautiful group representing the Child Jesus giving St. John a drink of water from a shell.

English art for a long while gave us pictures of child life associated only with vice, misery or suffering. Witness the children of Hogarth. But satirist as he is, he is still poet enough and full of the milk of human kindness to temper his severity with benevolence. We shall merely point to the country girl in the motley group of "Southwark Fair;" the lovely little girl in the election entertainment, who with childlike wonderment is examining the ring on the finger of a fine gentleman, and the two little urchins creeping slowly to school through Covent Garden Market: but there are many other exquisite specimens of childhood in his works, showing the painter's sympathy with and love of the little ones.



Children of Charles I.

VAN DYKE

Thomas Bewick's charming little vignettes abound in incidents from child life but it must be confessed that his children are represented as always in mischief. There is one I remember of a party of boys playing at soldiers among graves and mounted on a row of upright tombstones for horses.

Sir Joshua Reynolds' fondness for children is recorded in all his canvases in which they appear. There is a matchless picture of a

beautiful laughing child caressing a dog, that has a story connected with it which might be instructive to the photographer.

The father and mother of the little girl had intended she should sit to Romney, who at the time divided the town with Reynolds. But some friend advised them to employ Reynolds. "But his pictures they say fade." "No matter, take that chance, even a faded picture by Reynolds will be the finest thing you can have. Ask him to dine with you and let him become acquainted with her." The advice was taken, the little girl was placed beside Sir Joshua at the table, where he amused her so much with



The Writing Lesson

DE METZ

tricks and stories that she thought him the most charming man in the world and the next day was delighted to be taken to his house where she sat down with a face full of glee, the expression of which he caught at once and never lost, and the affair turned out every-way happily, for the picture did not fade after all.

We are all acquainted with Reynolds' Bible picture of "Little Samuel," an innocent little child saying his prayers at the foot of the bed, but it has nothing to do with the story of the Hebrew prophet and is only a picture of a lovely English boy. Then there is Reynolds' "Puck," which reminds us of Corregio's children.

One of his most delightful paintings is the famous Duchess of Devonshire and her child. There is the mother swinging her

laughing baby on her arm while it tosses up its little hands and kicks out its feet in sheer delight. It is the very incarnation of all that is joyous, clear and fresh upon this earth of ours. But Reynolds only reached this perfection after years of patient labor. And yet, reader, look at this picture and notice all the little gestures and expressions of the two happy ones caught just in the midst of movement and laughter, and tell me does it not remind you of an instantaneous photograph?

In all his pictures of children Reynolds shows that he was a loving observer of childish ways, that he was acquainted with all their little shyness and coyness. He always leaves them to their own sweet selves and so they always behave naturally, and need no rattles nor whistles nor jumping jacks to attract their attention while the exposure is being made. He caught them just as we photographers ought to catch them, in those moments when of all others they are most true to themselves.

Gainsborough also gives us charming child pictures. He would have been an enthusiastic amateur photographer had photography been known in his day.

Reynolds says that Gainsborough was wont to bring from the fields into his painting room stumps of trees, weeds and animals of various kinds; and designed them

not from memory, but immediately from the objects. He even framed a kind of model of landscapes on his table, composed of broken sticks, dried herbs and pieces of glass, which he magnified and improved into rocks, trees and water.

He wished to have his subjects embodied as it were and distinctly before him. He never chose to paint anything from



"So Big!"

REYNOLDS

invention when he could have the objects themselves. The picture of Georgianna Spencer is a true photographic pose. It is the picture of a good-natured little girl who has been asked to stand still, and in a meek little way she folds her chubby hands together, her quaint little face with its little pug nose peeping out of her white cap.

Van Dyke's children are represented with much truth to nature but their costumes make them look too much like little old men and women ; and it is only when we cover up this outlandish



The Doctor

ELIZ. STOKES ROBERTS

drapery that we fall in love with their sweet little faces, pensive almost to the verge of sadness.

We might go on drawing from the painters, pictures of child life, from Millais and Holman Hunt down to Mrs. Allingham's Fairy Tales and Kate Greenways' delightful studies from Mother Goose, but our object has been not so much to illustrate how the painters treat that delightful period

“ When the breeze of a joyful dawn blew free
In the silken sail of infancy ; ”



" Jean "

MATHILDE WEIL

as to show by the illustrations that the most delightful pictures are those which are truest to nature. That the true mission of art is not to change nature but to rightly interpret her, to render a subject so that it shall give pleasure to the beholder—for art like poetry is addressed to the world at large and not to a special jury of professional masters.



Mending Dolly's Clothes

W. H. ROBERTS

Originality in conception and individuality in execution is no more denied to photography than to painting. There is a novelty of unreality but also a novelty of unexpectedness.

Child photography is very near nature's heart, and children's world if sincerely and honestly expressed, will afford scope wide enough for the expression of individual taste, feeling and originality.

PORTRAIT POSING.

[CONCLUDED.]

EXPRESSION is the great test and measure of ability in the fine arts, and the success of the imitation is therefore dependent upon the personality of the imitator. The more capable the object is of affecting pleasing effect—the more is skill and æsthetic perception demanded of the photographer.

It might almost be said that no one can photograph more than his own character. He must know "*what beauty is,*" before he can see "*where beauty lies.*"

True, people are seldom themselves when they set out with intent and purpose to have their pictures taken, and even under very favorable circumstances the atmosphere of the studio puts them out of their normal environment.

There, for instance, is your person of melancholy mien, one who is wont to wear upon her countenance the aspect of patience on a monument. How is the operator to know whether that face is the sign-board which properly sets forth the commodities of sighs and groans, with which that bosom is filled? or, has it been assumed, merely that her portrait may have an interesting look.

Or, suppose "a merry man whose eyes beget occasion for his wit," who for the time has laid aside, with becoming gravity, his merry mood and possessed himself with the soul-absorbing theme



"Marian"

MATHILDE WEIL

of having his picture taken. How are we to know that this is but the mask of the man's true disposition and entirely unlike what his friends regard as his true "image and superscription."

Some "with eyes severe and beards of formal cut" pose with the dignity of a lord high chancellor; others assume a sweet angelic expression with eyes upturned, as if gazing on "heaven's winged cherubim." Some will continue to smile like Malvolio,

despite "the obstructions in the blood" occasioned by inquisitorial chairs and head-rests.

Portraiture must bring out the peculiar marks of individuality, the permanent characteristics which indicate the disposition of the man or woman, show "The mind's discernment in the face."

Study to make the sitter at ease. It is safer to make the exposure when he is unconscious of the act. Avoid all those gentle admonitions, "A little more this way, sir;" "you lean rather too much forward madam;" "Your eyes so;" "Now then please;" "Thanks," &c. Make all the necessary corrections and improvements yourself while en-



Portrait Study

MEYNER, PHILA.

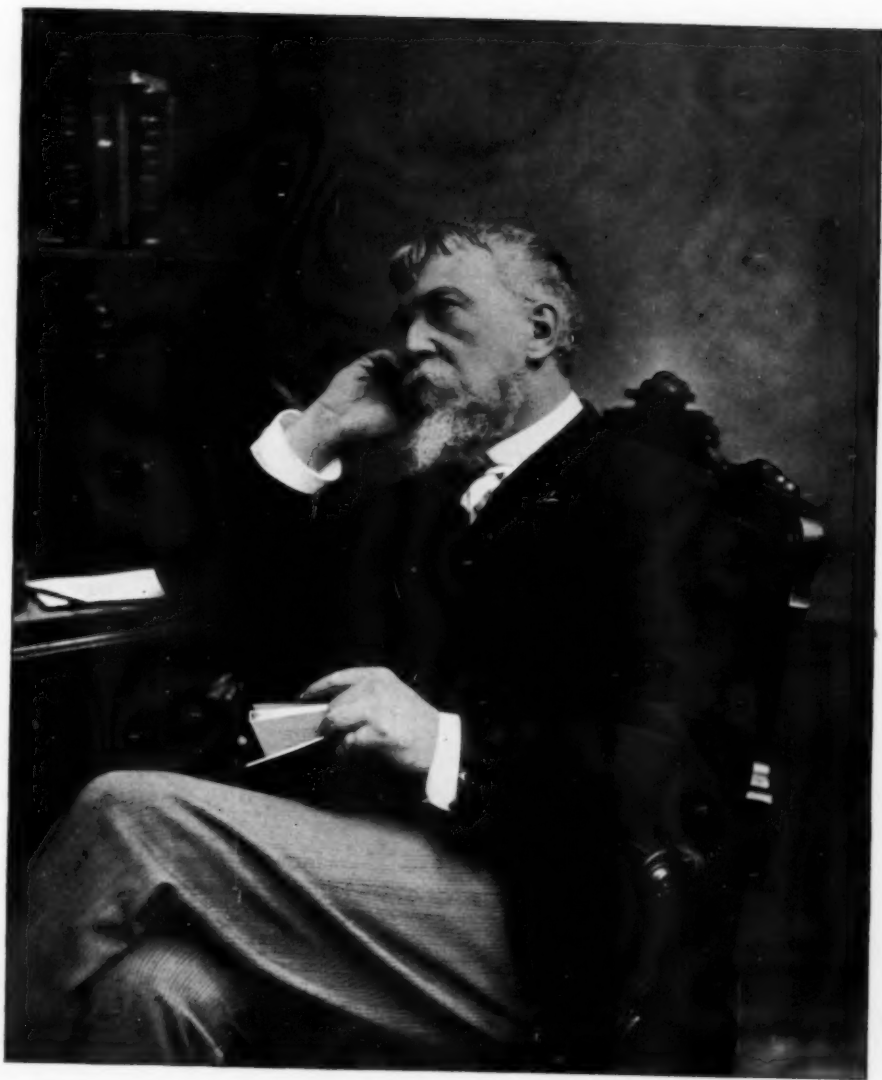
gaging your sitter's attention far away from your design.

Reason out definitely beforehand the proper mode of illumination and do not trust development to correct bad lighting.

Definiteness of purpose in posing is the key-note to harmonious composition.

Harmony in composition may be defeated if one does not properly fit the head to the shoulders.

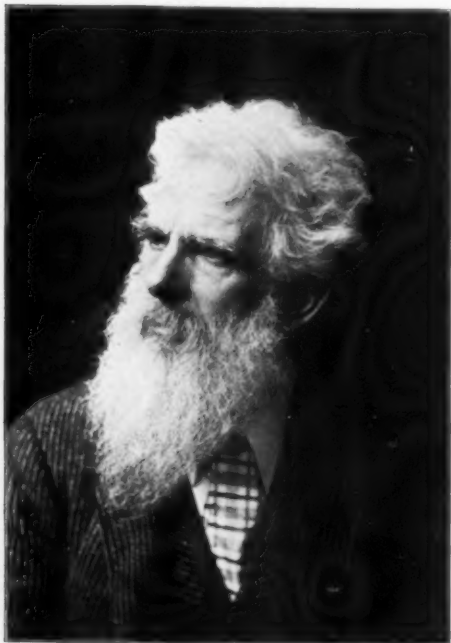
The body speaks as eloquently as the head in portraiture.



Dr. S. Weir Mitchell

MEYNEN, PHILA.

Everyone knows how the exquisite work of the Greek torsos, mutilated as they are, enables us to conceive of the beauty of the countenance, though the Greeks may not have cared for what we call "expression."



Eduard Muybridge

MEYNEN, PHILA.

If the sitter would permit it, one might profitably study photographs of the bust isolated from the head. Such a study of the torso would reveal to him first of all the inharmonious relations the hands exercise. It is not alone the difficulty of the skilful management of the light, now rendered more complicated by the spots formed, but the almost impossibility of making the general masses take pleasing shapes.

They are the unruly members, more than the tongue, and one would like to cast them into outer darkness—at least photographic obscurity—but they cannot be ignored, for they are accessory to the expression. Their proper disposition calls for all the ingenuity and judgment the photographer possesses.

The hands in Rembrandt's portraits, as in those of Holbein, do all that is asked of them, in a very proper, natural and expressive way; but Vandyke's hands are full of affectation and have an assumption of grace which is unpleasant.

The edge presentation is jumping the question. Study the disposition of the hands as well as the face. Let one sentiment animate both, or rather, we should say, all three.

Ruskin has very truly said: "In great imaginative conceptions it may often be inevitable, and sometimes desirable that, work should be but slightly traced and without minuteness of finish, but there is no excuse for imperfection in a portrait or failure of attention to its most minor accessories."

B.



"Polly"

MATHILDE WEIL

PORTRAITURE WITH FLASH LIGHT.

H. M. SUTTON.

THE general impression is that flash-light photography is a sort of a makeshift method which is only called into requisition when better means are not available. It is admirable for dark holes and obscure corners, but for portraiture or any work requiring exercise of artistic ability the propriety of its use is out of the question. Indeed the



majority of portraits or figure subjects one sees which are made by flash light certainly would not hold up the hands of efficacy for the magnesium light.

The reason why success is not achieved is to be traced to the presumption and carelessness of the operator.

A photographer who would devote considerable time to posing a sitter by daylight would grudge the expenditure of a few minutes with magnesium; and the sitter too, would cry out at

any attempt at focussing with the light and speak tauntingly of the instantaneity of the flash.

For photographing groups, unless necessity demands it, I would not recommend the flash light, because perversity more than physical causes will make some of the members close their eyes and so mar the effect.

For individual heads, flash light is capable of producing effects as soft and pleasing as daylight.

I prefer, despite the obnoxious smoke, the compounds of metallic magnesium powder with oxygen-giving chemicals. The light is more than twice as intense as that from the metal alone and the flash ten times as quick. Of course there is more danger with unknown compounds from burns, &c., but danger hardly ever deters the photographer if advantage lies in the direction of risk. In

fact the danger is almost nothing if care be taken to see that the powder is not caked and one is particular to use apparatus which does not bring flame in too close proximity with those potential grains of energy.

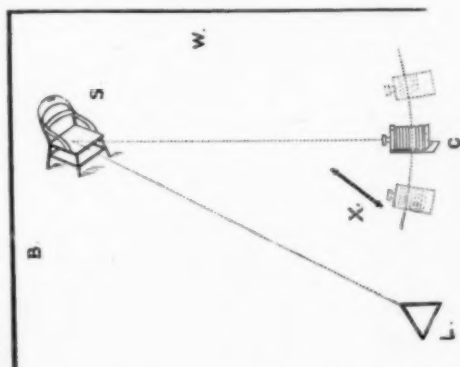
The style and direction of illumination is considerably under control ; anyone possessed of originality and taste may bring forth some novel and beautiful effects.

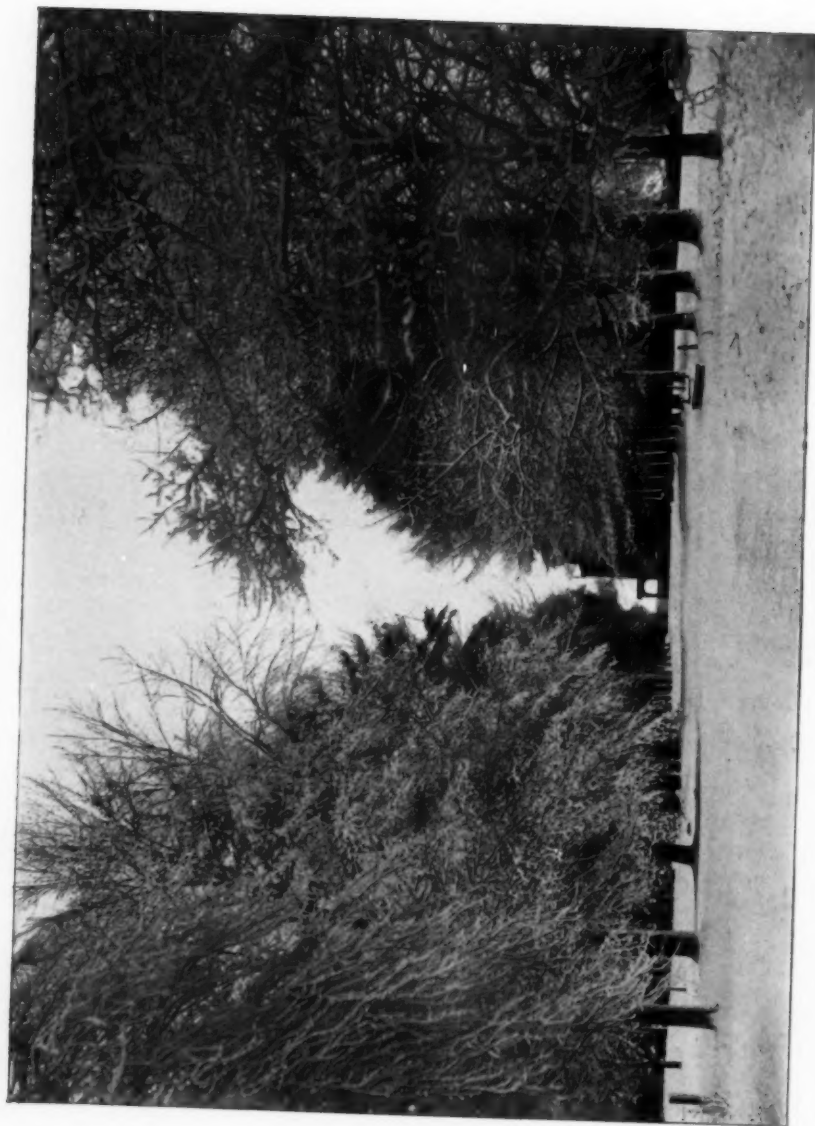
Magnesium light is really a softer illuminator than direct sunlight and the shadows are not as abrupt and intensely defined as those with electric light, and so it may be used without interposition of thin screens to modify it. Still I do not oppose the use of gauze or ground glass when very soft effects are needed.

Direct shadows are often very effective from an art point of view and magnesium will afford these better than the diffused light of our studios, and direct sunlight is too intense. The magnesium gives in perfection those artistic touches of high lights along the nose and on the cheeks and on the forehead.

For ordinary portraiture illumination I give the following diagram which will be readily understood : In the illustration S. represents the sitter ; L. the source of light at 45° laterally and vertically ; C. the camera ; X. the reflector for concentrating the light of the flash. The reflection from the walls of the room is generally sufficient to illuminate the shadow side of the face, but the shadow side may be illuminated, if necessary, by reflectors, paper or muslin, they should not be placed too near the face so as to reflect so much as would destroy the texture of the skin from showing in the photograph.

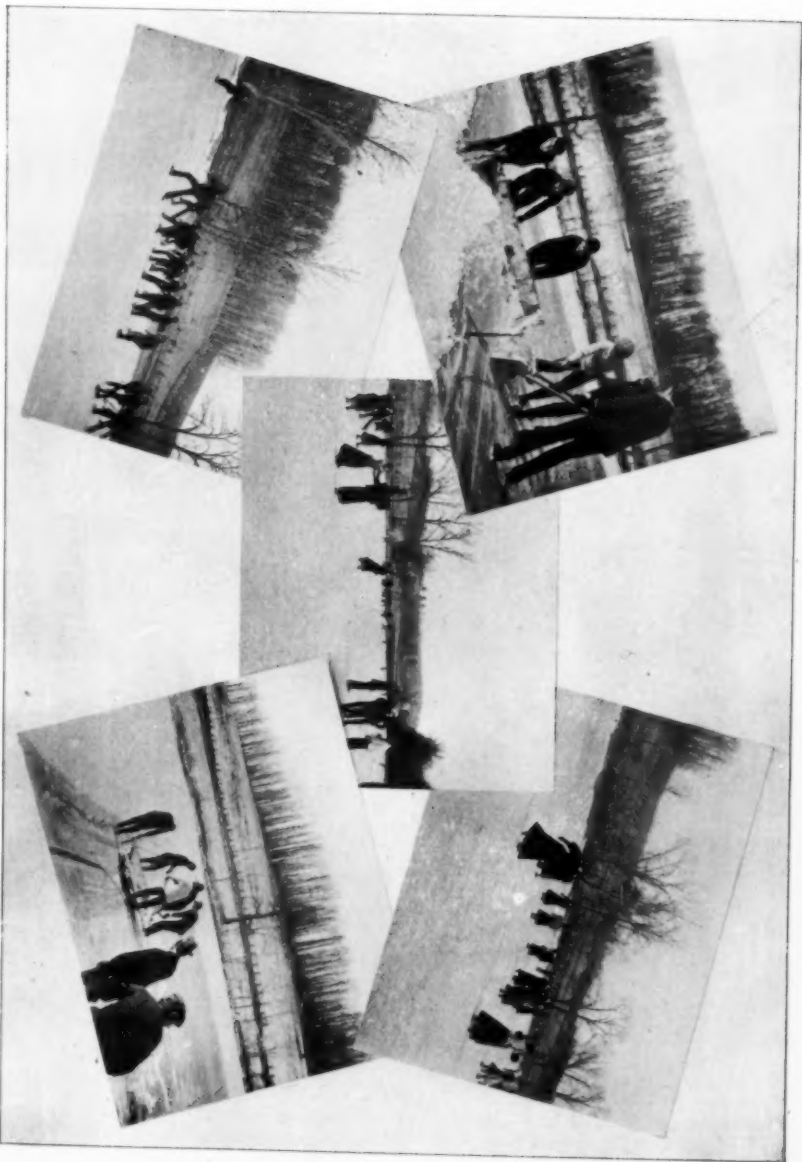
The higher the light is of course the lower the shadows, but the artist will regulate this for himself. If he wishes to try effects let him make use of a small strip of magnesium ribbon held at the desired height and angle, which, on being lit, will show the character of the illumination and also determine the position of the powder intended for making the exposure.





After the Snowstorm

NEGATIVE BY W. W. DEWEES



The Scaper at Work
Game of Hockey

The School at Play
Winter Sports at Westtown

Girls at Practice
NEGATIVE BY W. W. DEWEES
After Another Load

COPYING ENGRAVINGS AND OIL PAINTINGS.

W. H. BORDEN.

THE copying of engravings, etchings, etc., is a simple operation if certain conditions are observed. The engraving ought to be clean—and by clean I mean not only freedom from dirt or stain, but possession of a clearness of the white portion of the picture, in other words the paper itself. Mere soiling or dirt marks may be removed with stale bread crumbs, but the bread should absolutely have no grease in its constitution.

But if the engraving has become yellow with age, as sometimes happens, or has rusty-like patches on its surface, I have found the following method to work admirably, and as I have applied it to pictures which after the lapse of a year show no signs of having been injured, I think it may be used with safety on valuable subjects.

The engraving is soaked for a few minutes in a solution of carbonate of potash (one ounce to about a pint of water), and then, without washing, transferred to a dish containing a three per cent. solution of hydrogen peroxide. All traces of the age mark or stain will disappear in a few minutes, and the engraving have the appearance of a new print; a good washing in clear water follows.

Having a clear print free from the yellow marks, which if even faint would be intensified by photographing, the next thing is to get the print in proper position.

This might seem easy enough, but unless special arrangements are at hand much vexation will be occasioned the novice to get the copy exactly parallel with the camera. The best way and the shortest is to get an upright piece of board and to fit it at right angles to the end of a longer board which is intended to carry the camera. Side pieces might be attached to this long board so as to keep the camera in track when sliding it along to get the focus; and just here let me say never copy with any other kind of camera than a back focus one unless you are prepared for much weariness of the flesh and vexation of spirit.

With a front focus camera you will find it very troublesome to secure the required dimensions and sharpness of image.

The board which carries the engraving should be adjusted to slide up and down so as to get the centre of your picture opposite the centre of the lens, otherwise there would be irregularity in the rectangle.

When the engraving is bound up in a book, it is more difficult to get it flat. Rest the part of the open book containing the engraving against the upright board and the other portion allow to lie upon the horizontal part of the copying stand. A plate of glass of the clearest kind is placed against the page to be copied and held firmly against it by cords passed over strips of wood. A dark cloth is placed over the horizontal part of the book and also one in front of the camera with a hole cut in it for the lens to work through. These cloths will generally cut off reflections in the glass, but reflections should be carefully looked after.

In copying oil paintings in the photographic studio, more trouble is experienced in setting up the painting than with an engraving, both in getting it centred and in overcoming reflections. A painter's easel is most serviceable for securing position, but the illumination may cause some trouble. If the operator examines the painting set up as he would a person to be photographed, that is illuminated at angle of say 45° , he will notice patches of white light moving over the surface of the painting; these change with changes of his point of view and are occasioned by reflections from objects about the room.

If these reflections are suffered to remain of course they will copy, and even more emphatically than the picture itself; and the photographer must get rid of them before exposure. Remove all objects that are likely to reflect themselves; but there are things which cannot be so summarily dismissed, such as the walls of the studio or the skylight itself, and so one is obliged to alter the method of illumination. Do the focussing with the blinds all drawn up, then shut off all the light except that which comes about two or three feet in advance of the picture. By manipulating the blinds it will be noticed that the glare of light gradually leaves the painting from bottom upwards until it gets outside the frame. Of course this necessitates prolonged exposure, but as there is no danger of movement the time may even be reckoned by the hour instead of minutes, and sometimes very long exposure is necessary with reds and yellows in paintings and with the necessity of employment of orthochromatic plates. If the paint-

ing is photographed in an ordinary room the side light may be managed in the same way till the proper angle for avoiding reflection is secured. If the canvas is covered with a film and the film is only caused by dirt a wet sponge will remove it; but if the surface is dull from age a little nut oil will brighten it up. Some use glycerine and water but one is dubious about what one should apply to a valuable oil painting.

Now as regards the photographic negative. Of course orthochromatic plates ought to be used, and if blues and yellows are prevalent in the picture a screen should be used; but sometimes I have had excellent results with shorter exposures by dispensing with the screen and using light yellow tissue paper pasted over the source of light. There are no commercial plates which give first class results on pictures which contain reds and vermillions, crimsons, etc., but the red in the face of a portrait is mixed with yellow and with some blue and an ordinary orthochromatic plate without a screen will give good results. Plenty of time ought to be given to exposures as this helps in itself to more equally render the colors. Where pure reds are present one should make his own orthochromatic plate to get anything like true rendering of the color.

Line engraving copying requires a plate and method of development which shall give a vigorous image with clear whites and well-defined blacks; that is the lines must not be clogged up, and so it is best to secure this quality by proper development and not by thin development and subsequent intensification, as the intensifying process is liable to clog up the lights.

The most appropriate plate for line work probably is the collodion emulsion, which, if necessary, bears intensification better than gelatine bromide. But one cannot readily have at hand collodion emulsion plates and the best substitute will be found in the so-called process plate, which gives an intense image with clear glass and makes a most brilliant print. The developer best suited is pyro and potash, without any sulphite of soda; of course it must be freshly made and a few drops of citric acid—ten per cent. solution—added to it. This gives much more intensity than can be had, even with prolonged development, with the recently introduced developers.

When sufficient intensity is attained remove the plate from the developer and before washing it swab the entire surface over with

a pellet of cotton dipped in the citric acid solution, then remove to water to which a small amount of citric acid is also added, then thoroughly wash under the tap before fixing in clear plain hypo. A beautiful clear negative will result which will print quickly and brilliantly.

COMPOSITE LANDSCAPE.

WILLIAM R. RANKIN.

SOME years ago an eminent scientist proposed to employ photography for the purpose of obtaining a normal type or average of the features of a number of individuals and so secure an ideal expression of a certain class; for instance a generic type of poets, physicians, clergymen, etc. The objection to the finished picture was the confused image it presented by reason of the want of coincidence of the diverse outlines, some heads being physically if not intellectually longer heads than the others.

The jumble of uncombined outlines soon relegated it to the limbo of "innocuous desuetude," and whatever scientific value it possessed it was unable to secure any recognition artistically. But since the recent craze about diffusion of focus or equalization of definition of all the planes of a figure or scene in a photographic picture, might not the fuzzyites advantageously make use of it to embody their conception of aesthetic jumble.

To obviate the obnoxiousness of perfect definition some have gone so far as to suggest that it would be desirable to purposely put the image out of focus. But these artists, forgetting certain laws of optics, failed to observe that it is impossible to represent the whole of the object in the same degree of out of focus. If, for instance, in a head, the nose should be a little out of focus, the eyes would be considerably more so, and the ears still more: in fact some parts of the figure would be quite indistinct and confused whilst one portion only would be a little softened down by a slight deviation from the plane of sharp focus.

By the laws which regulate the action of lenses it happens that in the representation of a solid figure there is strictly only one plane of that solid which can be taken in focus. The image of that plane is therefore not in harmony with the images of the other planes which are not so sharply defined.

Doubtless, artistically considered, it would be a great advantage if it were possible to equalize the effect even at the cost of losing the mathematical accuracy of the plane in focus.

It is not at all desirable that one portion of the face should exaggerate all the rendering of wrinkles, pores, and defects and the other gradually lose all textural rendition.

Photographers, therefore, attempt in the delineation of the human face to strike an average focus, to focus upon a middle plane; for example, the eyes. Perfection of the portrait would be obtained were it possible to first take the plane of the nose then the focus of the eyes and finally the focus of the ear, and from these various images form a collective portrait.

This is what the composite photographer attempted, but the confusion of the outlines, that is, the diffused impression was not so much the point of objection as the alteration of the actual contour of the head by the impossibility of the sitters, or even one sitter retaining the exact position during the various exposures demanded.

Now with landscape the danger of change of position from successive exposures is not so great, and the thought suggested itself to the writer to make three different exposures of different foci and time corresponding to the three principal planes of a picture, the foreground, the middle, and extreme distance, and then by a process of multiple printing combine them for a composite landscape. True he is aware that variation in focus will cause variation in size of image but the advocate of fuzziness ought not to object to the artistic confusion occasioned thereby.

In the stereoscope we have, it is true, not two identical images of the same objects but they are so nearly the same that they might pass as such. The two images are superimposed upon our retinas without any optical confusions for reasons which it is not necessary to explain, but might we not have our stereoscope lenses adjusted so that one gives a focus on foreground, the other on the distance, and combine to a delightful confusion—or better make use of the kromoscope, which would give us the three planes superimposed—"Confusions' Masterpiece."

[We fear Mr. Rankin might be accused of giving us a composite essay—however, we think we see the woolly hare he is running to ground, and therefore shall not be critical.]—ED. OF A. J. P.

URANIUM RADIATION.

PROF. E. Rutherford, of Montreal, has a long paper in the *Philosophical Magazine* for January, 1899, on the remarkable radiation emitted by uranium and its compounds first discovered by Becquerel. Some of his results are here presented in condensed form.

The nature and properties of uranium radiation have been given in *Comptes Rendus*, 1896-97. Becquerel then showed that the radiation continuously emitted from uranium compounds has the power of passing through considerable thicknesses of metals and opaque substances; it has the power of acting on a photographic plate and of discharging positive and negative electrification to an equal degree. The gas through which the radiation passes is made a temporary conductor of electricity and preserves its power of discharging electrification for a short time after the source of radiation has been removed.

The results obtained by Becquerel showed that Röntgen and uranium radiations were very similar in their power of penetrating solid bodies and producing conduction in a gas exposed to them; but there was an essential difference between the two types of radiation.

He found that uranium radiation could be refracted and polarised, while no definite results showing polarisation or refraction have been obtained for Röntgen radiation. Prof. Rutherford in his paper, investigates the phenomenon more in detail both as to the nature of uranium radiation and also the electrical conduction produced. Among other subjects he considers:—

Refraction and Polarisation of uranium radiation.

Complexity of the radiation.

Comparison of the radiation from uranium and its compounds.

Opacity of bodies for the radiation.

Thorium radiation.

Absorption of radiation by gases.

Variation of absorption with pressure.

In investigating the subject of polarisation and refraction Prof. Rutherford was led to consider the question whether the almost identical effects produced by uranium and Röntgen radiations in gases might not lead one to suppose that the two types of radiation

did behave the same in other respects. To determine this he endeavored to see if uranium radiation could be refracted or polarised. He contradicts the evidence of Becquerel, who found that the rays were refracted and polarised. He took a large number of photographs by radiation, under various conditions, but in no case was able to observe any effect of polarization or refraction on the photographic plate.

In order to avoid fogging of the plate during the very long exposure required by the vapors of the substances, lead was employed in the neighborhood of the plate, as the effect on the film is very slight.

In testing for refraction a thick plate of lead was taken and a long narrow slit cut through it. This was placed over a uniform layer of uranium oxide; the arrangement was then equivalent to a line source of radiation and a slit. Thin prisms of glass, aluminum, and paraffin-wax were fixed at intervals on the lead plate with their edges just covering the slit. A photographic plate was supported 5 mms. from the slit and the plate was left for a week in a dark box. On developing a dark line was observed on the plate. The line was not appreciably broadened or displaced above the prisms. Different sizes of slits gave equally negative results.

If there was an appreciable refraction we should expect the image of the slit to be displaced from the line of the slit. Becquerel examined the opacity of glass for uranium radiation in the solid, and also in a finely divided state, by the method of electric leakage and found that, if anything, the transparency of the glass for the radiation was greater in the finely divided than in the solid state. Prof. Rutherford repeated the experiment and obtained the same result.

Polarisation was also tried. An arrangement very similar to that of Becquerel was used. A deep hole was cut in a thick lead plate and partly filled with uranium oxide. A small tourmaline covered the opening. Another small tourmaline was cut in two and placed on top of the first, so that in one half of the opening the tourmalines were crossed and in the other half uncrossed. The tourmalines were very good optically. The photographic plate was supported 1-3 m.m. above the tourmalines. The plate was exposed four days, and on developing a black circle showed upon the plate, but in not one of the pho-

tographs could the slightest difference in the intensity be observed. Becquerel stated in his experiment that the two halves were unequally darkened, and concluded from this that the radiation was doubly refracted by tourmaline, and that the two rays were unequally absorbed. .

Röntgen and others have observed that the x-rays are in general of a complex nature, including rays of wide difference in their power of penetrating solid bodies.

The penetrating power is also dependent to a large extent on the stage of exhaustion of the Crookes tube.

In order to test the complexity of the uranium radiation an electrical method was employed. The metallic uranium or compound of uranium to be employed was powdered and spread uniformly over the centre of a horizontal zinc plate. A second zinc plate of small size was fixed parallel to the one containing the powder and at 4 cm. from it.

Both plates were insulated ; the first was connected to one pole of a battery of 50 volts, the other pole of which was to earth ; the second plate was connected to one pair of quadrants of an electrometer, the other pair of which was connected to earth.

Under the influence of the uranium radiation there was a rate of leak between the two plates. The rate of movement of the electrometer-needle was taken as a measure of the current through the gas.

Successive layers of thin metal foil were then placed over the uranium compound and the rate of leak determined for each additional sheet.

The number of layers ranged from 1 to 13. It was found that for the first ten thicknesses of metal the rate of leak diminished approximately in a geometric progression as the thickness of the metal increased in arithmetical progression.

It was also shown that the rate of leak between two plates for a saturating voltage is proportional to the intensity of the radiation after passing through the metal.

Since the rate of leak diminishes in a geometric progression with the thickness of metal, we see from the above statement that the intensity of the radiation falls off in a geometric progression, that is, according to an ordinary law of absorption.

[TO BE CONTINUED.]

FIXING PRINTS.

JAMES KAY.

WHILE I do not believe that the combined toning and fixing bath in itself is responsible for the fading of prints, I do think that the improper compounding of it is a fruitful source of the dingy appearance some prints take on in less than six months after they are finished, and I also think that the fading is due more to insufficient action of the hypo on the silver than to insufficient final washing of prints.

The solution of hypo in connection with the toning solution is so weak, and even when the fixing is done separately the quantity of the hypo is so small, that the time allotted is not long enough to give long life to a print so treated.

This is especially the case when the aristo-paper prints are not well washed before putting into the combined bath. The excess of silver salt in the film gives the hypo extra work to accommodate the supply of silver in addition to that in the image. The best plan, therefore, is to wash well if you use combined baths. But even when prints are toned and fixed separately the perfect fixing is not always assured, and why? Just now matt silver prints are coming in vogue and are fancied for their dull surface, and plain prints used to be considered permanent enough. I remember when they cried out against albumen for the liability to fade more than plain prints, but now you find plain prints fading almost as quickly as aristos, and that is because they too are not properly fixed.

There is a craze for fancy tones, reds, etc., and when the amateur gets the tone he wishes, he never stops to think about complete fixing but lifts the print up and out of the hypo and washes it. Delighted with the possession of a Bartolozzi tone or something else, he finds after while to his disgust that all the white of his prints is yellow and ugly, and of course he blames plain paper and tries carbon or platinotype because they have not the objectionable silver salt in their make up. But he ought to blame himself.

Plain prints are all right when they are made properly—that is correctly fixed. It is also best to tone and finish plain prints in separate baths. You cannot get a good black tone in a combined bath.

The hypo bath ought always to be in considerable quantity newly made, but not used right away after making, because when you mix hypo and water together you produce a very low temperature. The cold temperature of the hypo prevents it from getting hold of the silver as quickly as it would if the temperature was higher.

It is by no means as active when cold as when only moderately cold. The hypo ought to be made up some hours before using so that it may get the temperature of the room. We used to make up our hypo bath the first thing in the morning, and though we did not just exactly weigh out the amount our measure was pretty near what is right. Vignettes need a little longer fixing than others. It is not a very strong hypo bath that is necessary but a large quantity of solution, first to take up all the free silver, and second to prevent stains by crowding the prints. I think if care is exercised in fixing, the responsibility will not be placed upon the insufficient washing.

A QUESTION OF CASUISTRY IN PHOTOGRAPHIC ETHICS.

THERE was a time when the veracity of the evidence afforded by the camera was accepted with unqualified acquiescence, but a time followed quickly when confidence in its results as an unfailing index of facts began to suffer by probation and those who implicitly believed in its infallibility learned that, like the witches which met Macbeth upon the blasted heath, photography could "lie like truth." The *deus ex machina* often made it become a lying spirit to deceive, so that it prevaricated with the aid of certain angle lenses, or elevation or depression of tripod legs.

A qualified deception is perhaps legitimate, and even expedient, from an artistic standpoint of judgment, but then the deception, like the cheat of vision in legerdemain, is admitted for the compensation which the deluded sense experiences in the accompanying pleasure or amusement.

The subject of hand-camera ethics has been frequently touched upon, and the fatal facility deplored with which the unscrupulous camarist creeps upon his unsuspecting victims and catches them in some embarrassing position, for exhibition before undesired spectators, who contemplate them with exultant glee and maliciousness.

There is probably no protection from such indecent invasions of privacy, unless the reproof of friends, or better, the self-consciousness of the meanness of the business, may restrain those who are subject to the despicable temptation.

The writer trusts he may be excused for narrating a personal encounter with one of these so-aptly-called "camera fiends"—not an experience in which he was the victim, but in which he acted the part of avenging justice—trusting that in the event of any question of casuistry that may present itself to the reader, he may not be censured for assuming the role of self-appointed Nemesis.

It was, as Lowell says, "a perfect day in June," a day when summer's lavishment is at its prime, and the temptation is so great that the truant spirit of boyhood easily overcomes the dictates of duty and we forsake without any "compunctious visitations of conscience," the rich account on the red-lined ledger leaves for the better wealth which the leaves of the woodland dell offer to us.

The goodly supply of plates had been exhausted early in the afternoon and we were on our homeward way to let the potent chemicals play the part of Prospero.

The path led through a little grove of trees, through which the western sun penetrated with a soft, diffused light. Although photographic propensities instinctively suggested the suitability of such an illumination for a rapid exposure, the spirit of contemplation aroused by the scene repressed the thoughts of plates, developer and exposure, and we yielded to the calm enjoyment of the holy time.

From our reverie we suddenly awoke, on hearing the soft murmur of voices nearby, and we perceived, though ourselves completely hidden from view, a young man and woman in earnest conversation, a short distance from the top of the low hill, along which we were passing. A glance revealed that the gentleman was evidently a clergyman, the lady we were acquainted with, and we knew that she had lately suffered the bereavement of a dear friend, the traces of deep sorrow were evident upon her countenance, while the face of the clergyman suggested to us Ary Scheffer's wonderful painting of the Consoling Christ, so full of sympathy and holy love. We felt that we were treading on sacred ground, and, with consciousness of intrusion, noiselessly hastened down the other side.

We had not made many paces when we were rudely disturbed by the ominous click of the detective camera—for it was a time ago when the shutters were noisier than nowadays, and the date of the occurrence is a reason why we do not hesitate to recount it. The principal actor in the scene long since passed away, and doubtless rejoices that we came between him and his fell purpose. But, to continue, we were joined by a youth, with a diabolical grin on his face at the success of his nefarious business.

He accosted us, giving us to understand that he knew us by reputation and exultingly informed us that he had bagged "two cads," dialating on the rich enjoyment the fellows would have at the next lantern show of the club. He was confident of his success, for the light was just right, and he asked all manner of questions about the best mode of development, whether pyro or oxalate was best adapted to snap shots, for ikonogen or hydroquinone had not been discovered. We feared, too, that the illumination might be just right, and could scarcely repress our indignation, or resist the inclination to administer summary cuffs upon the audacious offender against decency. We restrained ourselves, however, in the attempt to think of some plan of frustrating his dastardly purpose and probably would have changed our road to escape his company, when he suddenly asked us to hold his camera, as he had discovered by the roadside, at a little distance, a fern, the *polypodium crisptatum*, which he declared to be exceedingly rare in this part of the country, and rejoiced at his lucky find. Here is one, truly, thought we, who could, as Wordsworth says, "botanize on his mother's grave." The camera was left in our hands, while he climbed up the rocks to secure the coveted prize. The opportunity suddenly suggested the means of frustrating his unmanly intentions. Thought is quick, and in the brief interval we deliberated with ourselves the casuistry of the choice between a violation of confidence and the prevention of sacrilege, conclusion being speedily reached and the Jesuistical maxim, "the end justifies the means," urging its expediency with overwhelming force. In a twinkling the slide was drawn and the gracious light ruined that which the ungracious camarist had compelled it to effect. The coveted fern was secured, but the price was the loss of the unsanctified pleasure the thoughtless wight had anticipated.

H. B. L.

THE PRACTICAL VALUE OF RESEARCH.

IN these days, when we are in daily and hourly enjoyment of benefits directly traceable to original scientific research, made in the first instance for the purpose of increasing human knowledge, without thought of practical utility, it may seem strange that we should so often find people ready to ask the question, "What is the practical use of research?" But in one form or another this question has been put from time immemorial. Nowadays, it is, however, becoming increasingly difficult to find any man who has had a truly liberal education, and who does not know that material advantages to humanity have resulted from research in general. More commonly therefore, the question is more specific, and relates to some particular research. After all, it is a very natural question. The average man attaches little value to "knowledge for its own sake," and prizes only knowledge that can be turned to useful account. The popular mind always has valued the man who can do things above the man who only knows things, and, after all, there is a good deal to be said for this point of view, provided that the idea of utility is sufficiently wide and inclusive. We propose now to consider the question with special reference to researches that bear, or seem to bear, on photographic processes.

Now, in the first place, we must recognize in a broad and general way two distinct types of research, though, of course, there is no hard and fast line between them. There is, first of all, research that has for its object the discovery of entirely new facts, or the establishment of new laws or principles, without any utilitarian motive, and, secondly, there is research made with a view to ascertain to what extent and under what conditions the new facts, laws, or principles, can be applied to practical purposes. Of course, it frequently happens that research of the second type leads to the discovery of new facts and laws.

When research results in the production of some new *substance*, such as a new developer, as the persulphates for example, its utility is more easily appreciated than in the case of the establishment of some general law, the practical bearing of which is not very obvious.

Take, for instance, the general principle that developing power belongs only to certain classes of derivatives of benzene and

naphthalene, and not to other classes of derivatives of the same parent substance, which, nevertheless, are very closely related to the developers, so far as general chemical constitution and properties are concerned. Here the generalization is valuable, because it indicates along what lines to look for new developers, and helps to prevent loss of time in experimenting with substances not likely to be useful. The determination of the conditions under which a particular substance can be used to the best advantage in practice often involves research of a more prolonged, difficult and tedious character than which led to the discovery of the substance itself, and, therefore, since investigators are not numerous, it is desirable that their energies should be spent only on the most promising material. From this point of view a thorough investigation of the conditions under which the various developing substances combine with alkalis, and the properties of the alkali compounds, with special reference to the extent to which they decompose when dissolved in water, would really be very helpful in working out the best formula for a particular developer, although at first sight such a research might seem to have only a chemical, and not a photographic, interest.

Again, as an example of a research, much of the practical value of which depends on the accumulation of a large number of carefully-ascertained facts, quite apart from any explanation of the facts, we may take Dr. Russell's work on the action of various substances on photographic plates. Some of the chief facts have been known for a long time, but the facts have not only been extended, they have to a certain extent been systematized, and the conditions that determine the facts have in some cases been ascertained. We have learned, not only from what sources to look for danger, but also how, in many cases, the danger can be guarded against.

It would not be difficult to point out cases where practice is made more or less uncertain for want of accurate knowledge. For example, at the present time we have very little definite information as to what it is that really determines the sensitiveness of gelatino-bromide plates, and, although an investigation of this problem would involve many abstruse questions of chemistry and physics, and would be of the greatest interest, from the purely scientific point of view, the practical value of such an investigation, if successful in solving the problem, is obvious. Questions

concerning the constitution and properties of the latent or undeveloped photographic image are, we believe, often regarded as of scientific interest only, but it is at least probable that they will help towards the solution of the important practical problem to which we have just referred.

Perhaps it is scarcely necessary to emphasize the fact that the practical value of any research depends entirely on the way in which it is carried out. This is obviously true as regards both the scientific and the practical value. We are free to admit that a great deal of so-called research has very little practical value, even though made with direct practical objects, because it has not been properly carried out. The average man not having, it may be, the necessary training to enable him to distinguish between good research and bad, and finding himself misled by the so-called results of an improperly conducted investigation, is not unnaturally inclined to regard all research with great suspicion. This, we need hardly say, is not quite fair, and we may point out that what is commonly called "practical experience" is, after all, only the result of long continued observation under practical conditions, and, therefore, differs from the results of research only in the fact that it has been acquired unsystematically, and at a relatively very slow rate.

Further, it should not be assumed that, because the results of a particular investigation do not at once seem to be capable of practical application, therefore the investigation has been useless. The apparent want of utility may be due to the lack of insight on the part of him who seeks to make practical application, or, perhaps, the investigation may not become generally known, or may not be studied with sufficient care by those who have the necessary practical knowledge. It is doubtful, for example, whether the researches of Devanne and Girard on the toning of silver prints have even yet been applied in practice to the fullest possible extent.

Moreover, it may be that the research is incomplete, and is really of no practical value in its present form, but may subsequently serve as the indispensable basis of a further research, the practical utility of which is at once obvious.

There are so many instances of results of investigations that have remained unapplied and unvalued for years, and then, by the discovery of additional facts or principles, or because they

have come under the notice of some one with keener insight or wider knowledge, have quickly proved to be of the greatest practical importance, that we are scarcely justified in saying that any carefully ascertained fact or established law, though now only of scientific interest, may not in the future be found to have practical importance of the highest degree.—*C. H. B., in Photography, (London.)*

PHOTOGRAPHERS' ASSOCIATION OF PENNA.

WILKESBARRE, PA., Feb. 15.—The Photographers' Association of Pennsylvania opened its annual convention this evening with a general business meeting. The convention was to have opened this afternoon, but had to be postponed, as nearly all the delegates have so far failed to reach here, owing to the snow blockade. There is not a Philadelphia representative present. Not all the officers have arrived, neither have the lecturers nor numerous exhibits. The convention is badly handicapped, but the indications are that the snow blockade will be raised by Thursday.

President Seavey, of New Castle, and First Vice-President Schriever, of Emporium, had a thrilling experience on the way here, being snow-bound thirty hours at Fern Glen, Pa., near Hazleton, in a small railway station. Food ran out, and they and their fellow passengers shoveled a path through the snow, five feet deep, across the mountain top to Nuremberg, a distance of four miles. It kept them busy four hours, and they reached the town at midnight Monday, badly frost-bitten, tired and half-starved. At Nuremberg they secured hotel accommodations, and Tuesday morning were compelled to shovel their way through the snow again back to the depot, as winds had drifted the snow into mountain banks during the night. A caboose, drawn by two engines, succeeded in finally rescuing the storm-stayed passengers. —*The Press, Phila.*

Mr. J. T. Ryder, of Cleveland, O., has issued an interesting advertisement card representing a little child at the telephone calling up Mr. Ryder to tell him "Hello, Mr. Ryder! I like my picture real much, thank you for taking me so nice." We do not know whether the idea is original but it is pleasing and novel.

SCIENTIFIC NOTES.

The persulphate of ammonia continues to maintain its standing as the reducer par excellence. Further experience with it shows the necessity of thorough fixing of the negatives. Unless the plate is thoroughly fixed an indellible yellow stain will result which is even worse than the mercury stain.

The best plan is to subject the plate to two fixings. The negative should be fixed first not only till every trace of the silver bromide appears (the white parts) but five or ten minutes additional. Then it should be removed to a second bath, freshly made, and allowed to remain fully a quarter of an hour.

The method then amounts to this: any negative which on examination shows that it is too harsh to yield harmonious prints (supposing it to have even been thoroughly washed from hypo) must be refixed and then again washed. Furthermore, the persulphate of ammonia had better be employed even much weaker than the at first recommended 5 per cent. solution, as low as two per cent. will be found safer, followed if necessary by a solution a little stronger. The persulphate of ammonia at present procurable contains a large amount of free sulphuric acid, from carelessness of manufacture, and with such, one per cent will be found strong enough.

The action is slow but very regular and the high lights are effectively reduced without too great reduction of the shadows as in the ferricyanide or iron reducer. It is also necessary to check the continued action of the ammonium persulphate which goes on in the wash water for some short time. This continued action is prevented by stopping the reduction just before it reaches the degree finally desired or plunging the plate in a five per cent. solution of sulphite of soda, rocking it during the time it remains in it. The plate is removed when the persulphate solution ceases to show a bluish deposit and again washed. Persulphate of ammonia has also been advantageously used for improving harsh bromide prints.

Colored Transparencies.—Dr. Nantias, in the *Photographic Bulletin*, gives instructions for preparing plates for transparent positives of various colors. Any old plate that has been light struck or fogged or even old negatives may be utilized. If old negatives are used the photographic impression, the image,

should first be obliterated by the employment of a reducing agent, ferricyanide of potassium and hypo, then thoroughly washed and immersed in a weak solution of bichromate of potassa about 120 grains to an ounce of water. Light-struck or fogged plates should be placed immediately in the bichromate without use of the reducer. The plates are dried and exposed under a positive until all details are visible, then washed again.

To obtain the various colors on the positives they are placed in two baths, washing the plates after each bath. The strength of the solution is about one-half oz. to ten of water.

	FIRST BATH.	SECOND BATH.
For White,	Barium Chl.	Sodium Sulphate.
" Dark Red,	Uranium Nitrate.	Potassium Ferri Cy.
" Bright Red,	Copper Sulphate.	" Ferro "
" Blue,	Ferric Chl.	" " "
" Yellow,	Cadmium Chl.	Sodium Sulphate.
" Black,	Lead Acetate.	" "

Instead of a glass positive a waxed paper photograph may be used.

M. Curie announces that he has discovered that uranium minerals have associated with them certain other minerals which have not yet been isolated but which possess the property like uranium of emitting rays similar to X-Rays which penetrate through opaque bodies and impress their action on gelatine plates. It is thought that the so-called uranium rays are not really emitted from uranium but from their unknown bodies. An impure compound was separated from the uranium which was found to possess much more powerful energetic action, M. Curie stating it to be four hundred times as powerful.

From *The Sunday School Times*, February 4, 1899:

If it seemed strange that, with the modern widespread interest in photography, the AMERICAN JOURNAL OF PHOTOGRAPHY should suspend publication, as it did several months ago, it ought not to seem strange that a journal of its quality should now resume publication. The January number, just issued, not only contains articles of interest to amateur and professional photographers, but it is well illustrated with half-tone reproductions of photographs. The frontispiece is in itself an excellent study in the relations of light and shade. Cloud effects and snow pictures are timely and interesting articles in this issue. The price of this journal is reduced to one dollar per year. It is published by Austin C. Leeds, 817 Filbert St., Philadelphia.

NEWS ITEMS.

THE Ohio Amateur Photographers' Association was organized in Fostoria, O., November 25th, with the following officers : President, Clarence H. White, of Newark ; First Vice-President, A. E. Mergenthaler, of Fostoria ; Second Vice-President, M. Allison Martin, of Toledo ; Secretary, Miss Emma Spencer, of Newark ; Treasurer, Andrew Emerine, Jr. Preparations are in hand to recruit the membership from amateur clubs throughout the State, and the movement is a good beginning in the right direction.

EXHIBITION AT CHESTER, PA.—The second annual exhibition of amateur photographic work, under the auspices of the Camera Club of the Young Men's Christian Association of Chester, will be held at the Association building, Fifth and Edgemont Avenue, Chester, from March 23rd to 25th, inclusive. The exhibition will be limited to pictures from Delaware county photographers. No admission fee will be charged. Awards of merit will be presented in five or six classes of pictures. The club is desirous of securing a representative exhibit from all over the county and respectfully request that every amateur photographic worker send at once for a copy of the rules governing this exhibit. They will be sent free, by addressing the club as follows : Y. M. C. A. Camera Club, P. O. Box 248, Chester, Pa.

Mr. and Mrs. Snowden Ward will arrive in New York from England about February 20th, and during his visit Mr. Ward will deliver his lecture, entitled "The Real Dickens Land," before a limited number of literary and photographic societies, and will also repeat his former lecture on "Shakespeare at Home." The stereopticon slides which will be used are from negatives by Mrs. Catharine Weed Ward, taken specially for these lectures.

During his stay Mr. Ward expects to visit Philadelphia, and will doubtless repeat interesting lectures before our photographic societies.

At the ninth annual meeting of the Columbia Photographic Society, of Philadelphia, held at 1811 N. Broad St., Monday evening, February 6th, the following officers were chosen to serve for one year : President, Dr. G. J. R. Miller ; first vice-president,

P. A. Mitchell, ; second vice-president, Frank E. Gartley ; secretary, E. Ford Cuming ; directors, Newton E. Roedel, John S. Newman, Charles H. Smith, Frank V. Chambers, John Curtis, Jr., J. Henry Pepper, P. MacCaffrey, and Louis Renner. The treasurer's report showed that the entire floating indebtedness of the society had been paid off during the past year.

The Società Fotografica Italiana intends to hold a national photographic exposition at Florence, in April and May of the present year. Various sections will be devoted to the different branches of the art, the history of photography, artistic photography, technical photography, photographic apparatus, processes, scientific and industrial, and the literature of photography. A list of premiums is announced.

A NEW FIRM.—Mr. John A. Tennant, for some years past associate editor of *Wilson's Photographic Magazine*, New York, has resigned that post and formed a partnership with Mr. W. E. Ward, one of the founders of the *Photogram*, of London.

Messrs. Tennant & Ward are located at 289 Fourth Ave., New York, and will in a few weeks begin the publication of a monthly photographic magazine, *The Photo-Miniature*, which is, we learn, planned along new lines, and will not clash with existing photographic journals. The new firm will make a specialty of dealing at wholesale and retail in American and foreign photographic books, and will also have the American agency for a London firm of general publishers.

The book-list issued by Messrs. Tennant & Ward may be had on application at the above address.

BOOK NOTICES.

“**A**N INDEX OF STANDARD PHOTOGRAMS” is the title of a work which *The Photogram*, Ltd., London, is compiling. Mr. H. Snowden Ward is the moving spirit, and, as the title suggests, he aims at listing the work of photographers whose productions, through individuality or by specialty of subject, may at any time be in request, either by business men or private collectors.

The index will be divided into sections dealing with professional illustrators, the principal publishers of photographs, celebrities,

genre subjects, landscapes, etc. Some of the subjects will be further subdivided, and cross-references and an alphabetical index will render reference easy.

Special attention will be devoted to the less known but accessible photographs in national collections, or in the hands of scientific bodies or private individuals; and information facilitating the obtaining of lantern slides and process blocks will be included.

The book will include chapters dealing with the important question of copyright, both in this country and abroad, and with other matters of interest.

The great need of such a work of interest is obvious, and we ask our readers to cooperate with the publishers in insuring its complete success, by forwarding to the American representative particulars of any series of photographs of general interest which they may possess.

The American section is in the hands of W. E. Ward, 160 Broadway, New York, to whom all information should be sent, and who will be pleased to furnish any further information on request.

Percy, Lund & Co., London and Bradford, Eng., issue a very excellent photographic magazine, entitled *The Junior Photographer*, intended chiefly for novices in the art. The January number contains a number of interesting papers and choice illustrations of artistic work, including a beautiful frontispiece, the subject of which is a herring-boat, treated in an artistic manner. The magazine furnishes many valuable instructions and hints to beginners.

The same firm also publishes *The Practical Photographer*, designed for the general worker, and which is one of the most interesting photographic magazines that comes to us from abroad—both in subject matter and high standard of illustration.

Les Procédés Modernes d'Illustration, Administration, Sadag, Sécheron-Genève, Switzerland, comes to us for December, with beautiful specimens of three-color, gravure and reproduction work. It also contains a number of excellent papers on the National Swiss Exposition, of the employment of electricity in printing, chromolithography, and other matter important to the illustrator and printer.

THE MACMILLAN COMPANY announces the publication in February, under the editorship of Mr. Frank M. Chapman, of a popular, bi-monthly magazine, addressed to observers rather

than to collectors of birds, entitled *Bird-Lore*. This magazine will attempt to fill a place in the journalistic world similar to that held by the works of John Burroughs, Bradford Torrey, Olive Thorne Miller, and others in the domain of books.

In addition to general articles on birds in nature, contributed by observers throughout the country, there will be departments entitled "Notes from Field and Study," "Hints for Teachers and Students," and "For Young Observers." In the latter, the needs of young beginners will be given especial attention, and an effort will be made to develop the love of birds inherent in all children.

Bird-Lore will be the official organ of the Audubon Societies, and a department devoted to their work and aims will be under the charge of Mrs. Mabel Osgood Wright, the well-known writer of nature books, and president of the Connecticut Audubon Society.

It will be fully illustrated with reproductions of photographs of wild birds in their haunts, their nests and eggs—pictures which will not only possess an unusual fascination for the bird student, but will be of great interest to photographers as well.

Every prominent American writer on birds out-of-doors, with one or two exceptions, will contribute to *Bird-Lore* during the present year. The list includes John Burroughs, Dr. Henry van Dyke, Bradford Torrey, Olive Thorne Miller, Mabel Osgood Wright, Annie Trumbull Slosson, Florence A. Merriam, J. A. Allen, William Brewster, Henry Nehrling, Ernest Seton Thompson, Otto Widmann, and numerous other writers, known both for their powers of observation and description.

The first number of *Anthony's Process Quarterly* will make its appearance on January 1st. It will be published in the interest of the professional photo-engraving trade.

Its object will be to keep all interested persons posted on the new and improved apparatus, machinery, chemicals, etc., which are constantly being developed.

An opportunity will be given those who wish to express their views as to what, in their mind, will be beneficial to all interested, such as maintenance of a higher standard of work, prevention of price cutting, etc.

News from the associations and unions will be published that will be of general interest and without the assistance of a press censor.

CONVENTION DATES

AND NAME AND ADDRESS OF SECRETARIES.

Indiana Convention.

Indianapolis, Ind., February 28th to March 12th.

Secretary, W. O. Niceley, Bloomington, Ind.

Virginia Association.

March 22-24.

Secretary, N. V. Lineback, Richmond, Va.

Iowa Convention.

Des Moines, Iowa, May.

Secretary, W. O. Reed, Missouri Valley, Ia.

National Association.

Celoron, Chautauqua, N. Y., July 17th to 22nd.

Secretary, Geo. B. Sperry.

P. A. OF A. CONVENTION AT CELORON, CHAUTAUQUA, N. Y.

JULY 16-22, 1899.

LIST OF AWARDS.

Grand Portrait Class—Six pictures, 10 inches or larger. 1st award (to be chosen later); 2nd award, diploma. Competitors cannot enter any other classes except Grand Genre and Miniature Classes.

Grand Genre Class—Three pictures, 10 inches or larger. Subject to be chosen by the photographer and the title to be appropriately inscribed on the picture. 1st award (to be chosen later); 2nd award, diploma. Competitors cannot enter any other classes except Grand Portrait and Miniature Classes.

DIVISION CLASSES.

Competitors can enter but one of the three division classes, but can in addition enter any two of the general classes.

Class A—Twelve pictures, 13 inches or larger. 1st award, gold medal; 2nd award, silver medal; 3rd award, diploma.

Class B—Nine pictures, 9 inches or larger. 1st award, silver medal; 2nd award, bronze medal; 3rd award, diploma.

Class C—A rating competition. Twelve cabinets only. Must be framed in one frame. To the exhibit receiving the best rating, silver medal; and to all deserving exhibits a bronze medal.

GENERAL CLASSES.

For open competition for all members of the Association.

Miniature Class—Eighteen pictures smaller than cabinets, suitably framed. 1st award, gold medal; 2nd award, silver medal; 3rd award, bronze medal.

[CONTINUED ON PAGE 96.]

Dr. John Nicol has written a new book on photography entitled: "The Right Road Into Photography," published by G. Gennert, 24 E. Thirteenth Street, New York. We have not yet seen the book but are assured that anything coming from the pen of Dr. Nicol, will not only be found well written and concise but valuable for the information on all topics connected with photography, for Dr. Nicol is a true veteran in the profession and a scholarly writer.

We have been shown a number of examples of prints on velox paper, which are rich in color and beautiful in gradations and moreover we are told these qualities are secured by amateurs who have not had very considerable experience in bromide printing. It certainly is a very convenient, comfortable and beautiful process for producing prints, and is under considerable control so that indifferent negatives by skilful shading (the long exposure enabling it), may be made to yield better prints than are generally had by other methods of developing.

From *Wilson's Photographic Magazine*, February:

The AMERICAN JOURNAL OF PHOTOGRAPHY has been revived, and will hereafter be edited by JOHN BARTLETT and published by A. C. LEEDS, from 817 Filbert St., Philadelphia, as a 48-page monthly, illustrated, at \$1 per year.

MR. BARTLETT is already well known to amateur and professional workers as a writer who invariably says something worth knowing, and the AMERICAN JOURNAL in his hands will be a valuable addition to our photographic literature. We look for its reappearance with interest.

Aluminum Sun Flash Powder

THE BEST POWDER MADE

New List Price, 30c. per oz.
In Cartridges of Six, with Fuse, 25c.
For Sale by all Dealers.

WILLIAMS, BROWN & EARLE
918 Chestnut St., Phila.

Send for Catalogue and Bargain List No. 13

Platinotype Paper

Rembrandt Mounts, [patented] and
Pure Potassic Chloro-Platinite

Sample package of paper by mail on receipt
of 25c. Send for Pamphlet.

WILLIS & CLEMENTS, Phila., Pa.

SPECIALTIES

Metol-Hydrochinon
Developer
Lantern Slide
Developer
Fixing and Clearing
Bath
Intensifier
Flash Cartridges

THE QUEEN



COMPOUNDED

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QUEEN & CO.

1010 CHESTNUT ST.

PHILA., PA.

FROM THE
PUREST CHEMICALS

PHOTOGRAPHIC PREPARATIONS

Group Class—Four pictures, 9 inches or larger. 1st award, silver medal; 2nd award, bronze medal; 3rd award, diploma. Groups must not be combined from separate negatives.

Landscape Class—Nine pictures, 9 inches or larger. 1st award, silver medal; 2nd award, bronze medal; 3rd award, diploma.

Marine Class—Nine pictures, 9 inches or larger. 1st award, silver medal; 2nd award, bronze medal; 3rd award, diploma.

Interior Class—Nine pictures, 9 inches or larger. 1st award, silver medal; 2nd award, bronze medal; 3rd award, diploma.

Commercial Class—Twelve pictures, 9 inches or larger. 1st award, silver medal; 2nd award, bronze medal; 3rd award, diploma.

Foreign Class—Best collection of photographs of any size, framed or unframed, to be delivered to the association free of charge. 1st award, silver medal; 2nd award, bronze medal; 3rd award, diploma.

RULES AND REGULATIONS.

1. No exhibitor can compete in more than three classes.
2. All competitors must be members of the association, except in Foreign Class.
3. When one dimension of picture is given, it applies to the entire length or breadth of picture in all cases. This rule applies to size of print and not to mount.
4. All exhibits must be framed without glass. In framing exhibits in Class C and in Miniature Class, put all pictures in one frame. Any exhibit not framed will not be hung.
5. All exhibits must be delivered in Jamestown, N. Y., care of P. A. of A., by July 9th, and all charges prepaid.
6. Application for space in the Art Department to close positively Monday, July 3rd. Application for space to this department must be made to S. L. Stein, 1st Vice-President P. A. of A., 128 Wisconsin St., Milwaukee, Wis.
7. All exhibits of pictures must be addressed to S. L. Stein, 1st Vice-President P. A. of A., Jamestown, N. Y., and all charges prepaid. In case charges are not prepaid, the association will not accept same from the express company.
8. Exhibits of Dealers' and Manufacturers' Department to be shipped to Geo. B. Sperry, Secretary P. A. of A., Jamestown, N. Y., charges prepaid, and must be placed in position by July 15th.
9. Have your box covers screwed instead of nailed. Your home address must be marked on under side of cover for return of pictures. Association will not be responsible for pictures not so marked. Put screw eyes and picture wire for hanging in box.
10. All boxes and packages will be accepted at any time previous to July 15th, so that photographers need not feel any uncertainty about the safety of their goods. No exhibits will be allowed to be removed from the hall until the close of the convention.
11. No manufacturer, dealer or their representatives shall do business on the floor of the hall unless he or they rent floor space or desk room.

[CONTINUED ON PAGE 98.]

TAPESTRY PAINTINGS



2000 Tapestry Paintings to Choose From.
30 Artists Employed, including Gold Medalists of
the Paris Salon.

WHEN IN NEW YORK don't fail to call and see these
Paintings. You will be welcomed. Make this place a
point of interest. We rent Tapestry Paintings. Send
25c. for Compendium of 140 Studies.

Artistic Home Decorations

We can show you effects NEVER before thought of and at moderate
prices, too.

Why have your house decorated and painted by inferior workmen, when
you can have it done by skilled workmen—by artists—for the same
price?

Write for Color Schemes, Designs, Estimates. ARTISTS SENT TO ALL PARTS OF
THE WORLD, to execute every sort of Decorating and Painting. We are
educating the Country in Color-Harmony.

Wall Paper, Stained Glass, Relief, Carpets, Furniture, Par-
quetry Tiles, Window Shades, Art Hangings,
Draperies, Etc.

WALL PAPERS. New styles, designed by gold medal artists. From 10 cents
per roll up. Send 50 cents to prepay expressage on large sample books and drapery.
A quantity of last year's paper, \$1 and \$2 per roll. Will include drapery samples
in package. See our Antique Metallic, French Pressed Silks, and Lida effects in
special colors to match all kinds of wood work, carpets and draperies. Have 500
different wall hangings with draperies specially made at our Broomhead Mills,
Paterson, N. J., to match.

DRAPERIES. We have Draperies to match all wall papers from 15 cents a
yard. This is a very important feature, to attain the acme of an artistic excellence
in decoration. No matter how much or how little you want to spend, you must
have harmony of form and colorings. Write us for samples. Special Silk Drap-
eries made at our Broomhead Mills, Paterson, N. J. Encourage home industry!
Write us for samples!

TAPESTRY MATERIALS. We manufacture Tapestry Materials. Superior
to foreign goods and half the price. Book of samples, 10 cents. Send \$1.50 for
trial order, for 2 yards of 50-inch wide, No. 6 goods, worth \$3.

DECORATIVE ADVICE. Upon receipt of \$1, Mr. Douthitt will answer any
question on interior decorations—color-harmony and harmony of form, harmony
of wall coverings, carpets, curtains, tiles, furniture, gas fixtures, etc.

MANUAL OF ART DECORATIONS. The art book of the century. 200 royal
quarto pages, filled with full-page colored illustrations of modern home interiors and studies.
Price, \$2. If you want to be up in decoration, send \$2 for this book; worth \$50.

SCHOOL. Six 3-hour tapestry painting lessons, in studio, \$5. Complete written instructions by
mail, \$1. Tapestry paintings rented; full-size drawings, paints, brushes, etc., supplied. Nowhere,
Paris not excepted, are such advantages offered pupils. New catalogue of 125 studies, 25 cents.

Send \$1 for complete instructions in tapestry painting and compendium of 140 studies.

GOBELIN PRINTED BURLAPS. Over 100 new styles for wall coverings, at 25 cents per yard, 35
inches wide, thus costing the same as wall paper at \$1 per roll. 240 kinds of Japanese Lida leather
papers at \$2 per roll.

GOBELIN ART DRAPERY. Grecian, Russian, Venetian, Brazilian, Roman, Rocco, Dresden,
Festoon College Stripe, Marie Antoinette, Indian, Calcutta, Bombay, Delft, Soudan, from 10 cents a
yard to 75 cents.

IN ORDER THAT WE MAY INTRODUCE THIS LINE OF NEW ART GOODS, WE WILL SEND ONE
YARD EACH OF 50 DIFFERENT KINDS OF OUR MOST CHOICE PATTERNS FOR \$7.50.

JOHN F. DOUTHITT

American Tapestry Decorative Co.

286 Fifth Avenue, NEW YORK
Near 30th St.

11. No exhibit shall contain any name or marking that shall in any way reveal the identity of the exhibitor.

13. All entries for competition must be for prints from negatives made since the last convention.

EXTRACT FROM CONSTITUTION.

Membership. Section 5. Any person who is eligible may become a member of this association by making application to the Treasurer and paying an initiation fee of three dollars and annual dues of two dollars in advance.

Section 6. Employees will pay into the Treasury as their annual dues the sum of two dollars. No initiation is required. Application for membership should be made to Geo. W. Varney, Treasurer P. A. of A., 3937 Drexel Boulevard, Chicago.

Signed,

F. W. GUERIN,
S. L. STEIN,
F. R. BARROWS,
GEO. W. VARNEY,
GEO. B. SPERRY,

Executive Committee.

PHOTOGRAPHERS' ASSOCIATION OF VIRGINIA.

CONVENTION, MARCH 22-24, 1899.

All competitors must be members of the Association.

Any professional photographer may become a member and be eligible to competition by paying \$2.00 initiation fee and \$2.00 annual dues in advance. Employees, \$1.00; no initiation fee.

H. V. LINEBACK, Secretary,
429 Broad St., Richmond, Va.

Practical demonstrations in manipulation and operating will be given by prominent workers.

All photos to be framed without glass, separately.

Application for space to be made to William Freeman, 346 Main St., Norfolk, Va., by February 22, 1899.

Full particulars of prizes and conditions on application to the Secretary H. V. Lineback.

QUESTION BOX.

George Gildeon, Phila. Feb. 9, 1899.—I read in the papers recently of the excellent results obtained by persulphate of ammonia as a reducer, and at once tried to procure some from the drug store, but found that the clerks had never heard of the stuff. Where can it be had?

Persulphate of ammonia may now be had at low price at the chemists.